

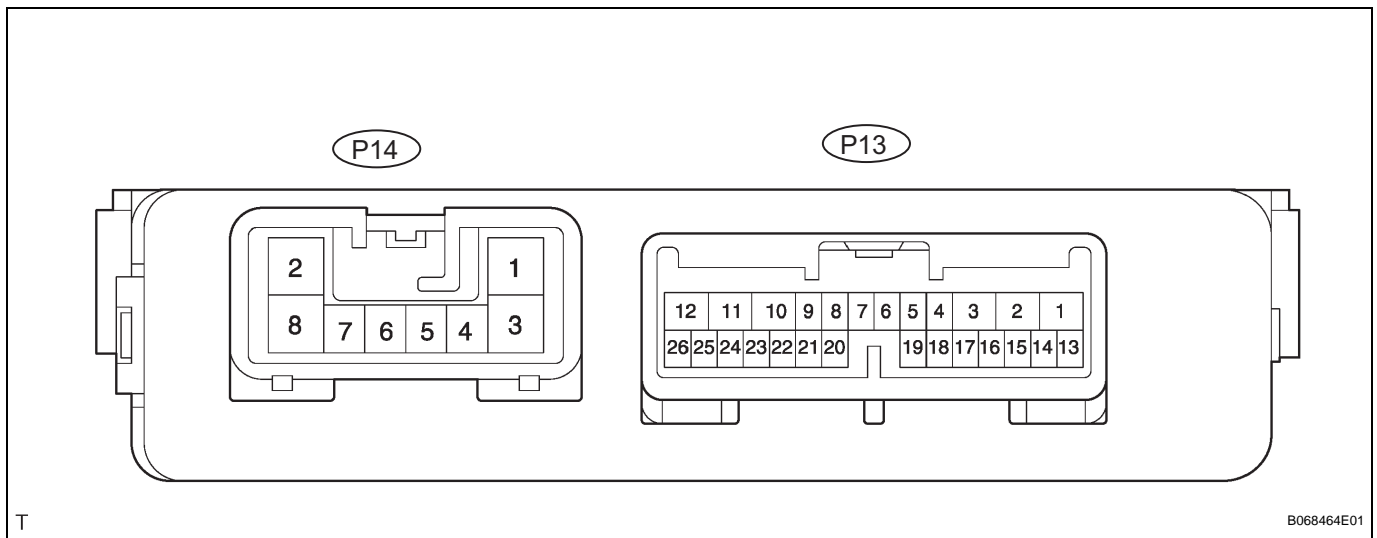
PROBLEM SYMPTOMS TABLE

Symptom	Suspected area	See page
Power back door does not operate	ECU-B NO.1, ECU-IG NO.1, AM1 fuse	-
	ECU power source circuit (power back door ECU)	ED-63
	Power back door main switch circuit	ED-60
	Power back door opener/closer switch circuit	ED-52
	Power back door closer switch circuit	ED-49
	Back door lock latch switch circuit	ED-46
	Back door lock courtesy switch	ED-144
	Power back door drive unit	ED-137
	Instrument panel J/B (Body ECU)	-
	Power back door ECU	-
Jam protection function is activated while power back door is operating (for various reasons*)(*: It may be caused by ill-fitting back door, faulty touch sensor or faulty pulse sensor)	Fitting condition of back door	-
	Power back door touch sensor	ED-136
	Wire harness	-
	Power back door ECU	-
Power back door warning buzzer does not sound	Power back door warning buzzer circuit	ED-55
	Power back door ECU	-

TERMINALS OF ECU

1. CHECK POWER BACK DOOR ECU

- (a) Disconnect the P13 and P14 connectors from the power back door ECU.



- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
HSW (P13-3) - Body ground	GR - Body ground	Power back door opener switch (outside handle) input	Power back door opener switch OFF → ON	10 k Ω or higher → Below 1 Ω
BDDN (P13-4) - Body ground	W - Body ground	Power back door closer switch signal input	Power back door closer switch OFF → ON	10 k Ω or higher → Below 1 Ω
MSE (P13-5) - MSW (P13-6)	W-B - G	Power back door off switch signal circuit	Power back door main switch OFF → ON	10 k Ω or higher → Below 1 Ω
CTYE (P13-7) - Body ground	P - Body ground	Back door courtesy switch signal input	Back door is closed → opened	10 k Ω or higher → Below 1 Ω
OSL (P13-14) - OSE (P13-15)	G - Y	Power back door touch sensor LH circuit	Back door touch sensor LH not pressed → pressed	Approx. 1 k Ω → Below 100 Ω
OSR (P13-16) - OSE (P13-15)	L - Y	Power back door touch sensor RH circuit	Back door touch sensor RH not pressed → pressed	Approx. 1 k Ω → Below 100 Ω
CTYO (P13-19) - Body ground	BR - Body ground	Back door courtesy switch signal output	Back door is closed → opened	10 k Ω or higher → Below 1 Ω
GND (P14-8) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

HINT:

If the result is not as specified, there may be a malfunction on the wire harness side.

- (c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IG (P13-9) - Body ground	GR - Body ground	Ignition switch input	Ignition switch OFF → ON	Below 1 V → 10 to 14 V
ECUB (P13-10) - Body ground	BR - Body ground	ECU power supply	Always	10 to 14 V
MPX1 (P13-22) - Body ground	SB - Body ground	Multiplex communication signal circuit	Ignition switch ON	Signal waveform
B (P14-2) - Body ground	Y - Body ground	Motor drive power supply	Always	10 to 14 V

HINT:

If the result is not as specified, there may be a malfunction on the wire harness side.

- (d) Reconnect the P13 and P14 connectors to the back door ECU.
- (e) Measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BZR- (P13-1) - BZR+ (P13-2)	O - B	Power back door warning buzzer signal input	Back door warning buzzer is stopped → sounded	Below 1 V → 10 to 14 V
HAF (P13-8) - Body ground	R - Body ground	Back door lock half-latch switch signal input	Back door is opened → back door closer motor is operated → back door is closed	Below 1 V → 10 to 14 V → Below 1 V
DC- (P13-11) - DC+ (P13-12)	B - G	Back door closer motor circuit	Back door closer motor is stopped → operated	Below 1 V → 10 to 14 V
FUL (P13-18) - Body ground	V - Body ground	Back door lock full-latch switch signal input	Back door is closed → opened	10 to 14 V → Below 1 V
POS (P13-21) - Body ground	LG - Body ground	Back door lock position switch signal input	Back door is opened → back door closer motor is operated → back door is closed	Below 1 V → 10 to 14 V → Below 1 V
DS2 (P13-24) - DSG (P13-23)	GR - R	Power back door drive unit pulse sensor 2 signal input circuit	Power back door motor is stopped → operated	Below 1 V → Alternating between 10 to 14 V and below 1 V
DS1 (P13-25) - DSG (P13-23)	Y - R	Power back door drive unit pulse sensor 1 signal input circuit	Power back door motor is stopped → operated	Below 1 V → Alternating between 10 to 14 V and below 1 V
DSV (P13-26) - DSG (P13-23)	L - R	Power back door drive unit pulse sensor power supply circuit	Always	10 to 14 V
BD+ (P14-1) - BD- (P14-3)	B - W	Power back door drive unit motor circuit	Power back door motor is stopped → operated	Below 1 V → 10 to 14 V
CL- (P14-6) - CL+ (P14-7)	G - BR	Power back door drive unit clutch circuit	Power back door motor is stopped → operated	Below 1 V → 10 to 14 V

HINT:

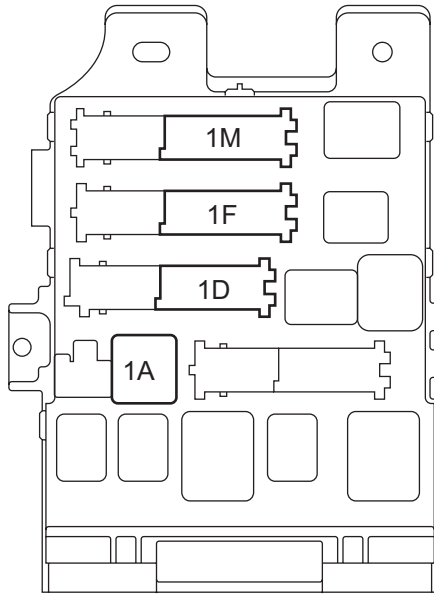
- Use an oscilloscope to check the output voltages of the power back door main switch, buzzer and pulse sensor.

- If the result is not as specified, the ECU may have a malfunction.

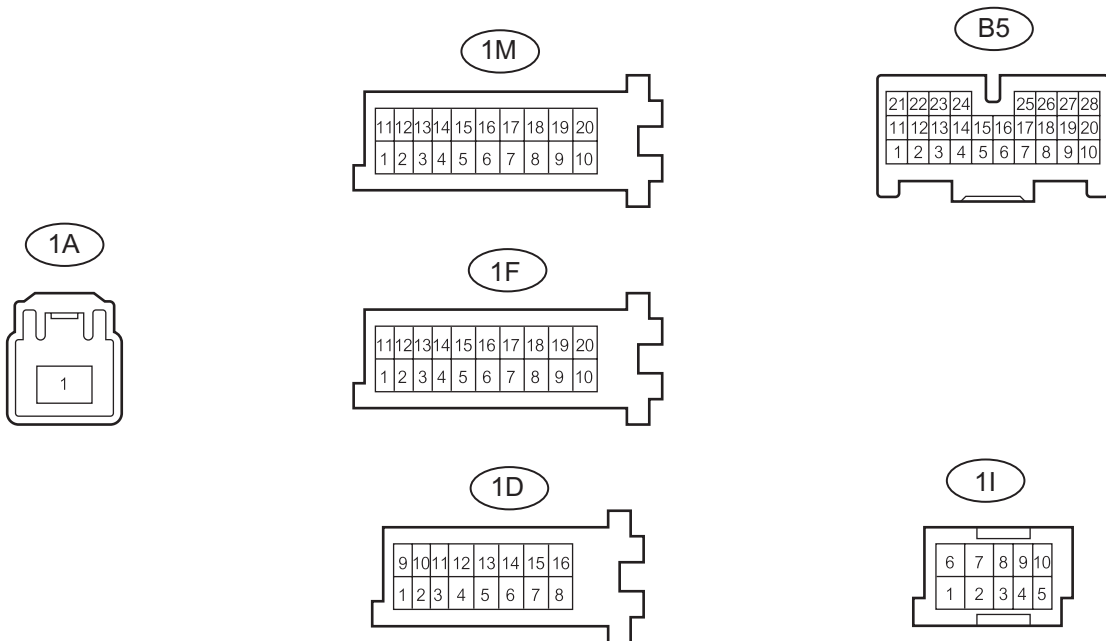
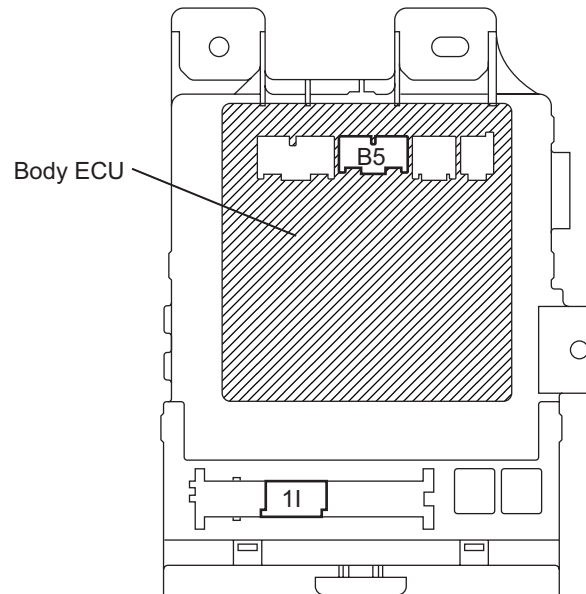
2. CHECK INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (BODY ECU)

- (a) Disconnect the 1A, 1D, 1F, 1M and B5 connectors from the instrument panel junction block assembly and body ECU.

Vehicle Rear Side:



Vehicle Front Side:



- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
GND1 (1F-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (1M-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
PBDS (B5-2) - Body ground	V - Body ground	Power back door opener/ closer switch signal input	Power back door opener/closer switch OFF \rightarrow ON	10 k Ω or higher \rightarrow Below 1 Ω
BCTY (B5-25) - Body ground	P - Body ground	Back door courtesy light switch signal input	Back door is closed \rightarrow opened	10 k Ω or higher \rightarrow Below 1 Ω

HINT:

If the result is not as specified, there may be a malfunction on the wire harness side.

- (c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BATB (1A-1) - Body ground	B - Body ground	+B (power system, battery system) power supply	Always	10 to 14 V
BECU (1D-10) - Body ground	W - Body ground	+B (BECU) power supply	Always	10 to 14 V
ALTB (1D-16) - Body ground	W - Body ground	+B (power system, generator system) power supply	Always	10 to 14 V

HINT:

If the result is not as specified, there may be a malfunction on the wire harness side.

- (d) Reconnect the 1A, 1D, 1F, 1M and B5 connectors to the instrument panel junction block assembly and body ECU.
- (e) Measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IG (1I-4) - Body ground	O - Body ground	Ignition switch power supply	Ignition switch OFF \rightarrow ON	10 to 14 V \rightarrow Below 1 V

HINT:

If the result is not as specified, the instrument panel junction block assembly and body ECU may have a malfunction.